A STUDY TO ASSESS THE KNOWLEDGE REGARDING CARE AND PREVENTION OF COMPLICATIONS OF SPINAL ANAESTHESIA AMONG B.SC. NURSING STUDENTS AT SELECTED NURSING COLLEGES OF BENGALURU

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ABSTRACT

Pain is a complex, multidimensional experience. For many people, it is a major problem which causes suffering and reduces quality of life. It is one of the major reasons that prompts people to seek health care. A "Quantitative research approach" was used in the present study. The pre-experimental research design was used. The setting of the study was Dhanwantri Nursing Institutions and Sri Venkateshwara College of Nursing. The population of the present study was B.Sc. Nursing students. Samples for the present study were the students studying B.Sc. Nursing. A probability random sampling strategy was utilized for the present study. The sample size of the present study was 100 B.Sc. Nursing Students. The results of the pre-test knowledge assessment revealed interesting findings regarding the care and prevention of complications of spinal anesthesia among B.Sc. nursing students. The highest frequency of scores fell within the range of 51-60, with 22 students achieving scores within this range. This suggests that a considerable number of students had a moderate level of knowledge regarding spinal anesthesia. However, the number of students scoring in higher ranges gradually decreased, indicating a smaller proportion of students with a deeper understanding of the topic. These findings highlight the variability in knowledge levels among the participants. To further evaluate the significance of the pre-test knowledge scores, a t-test was conducted comparing the mean score of 58.5 (assumed baseline knowledge) with the actual pre-test scores. The calculated t-value of 9.55 indicated a significant difference between the pre- test knowledge scores and the assumed baseline knowledge score. The results indicated a significant difference between the pre-test knowledge scores and the assumed baseline knowledge, emphasizing the need for educational interventions to improve students' knowledge in this area. The mean pre-test score was found to be 58.5, indicating the baseline knowledge level of the participants. After the intervention, the mean post-test score significantly increased to 73.5. The standard deviation ofthe pre-test scores was 8.9, while the post-test scores had a standard deviation of 7.6. The calculated t-value of 19.74 indicated a significant difference between the pre-test and post-test scores. In conclusion, the analysis of post-test knowledge scores among B.Sc. nursing students reveals a significant improvement in their understanding of the care and prevention of complications related to spinal anesthesia.

Key Words: *Multidimensional, sufferings.*

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INTRODUCTION

Selection of anesthetic approach for lower extremity operations is often a controversial issue for anaesthesiologists. In recent years, there has been a significant tendency towards the spinal anesthesia (SA) rather than general anesthesia (GA) in orthopedic surgeries. SA is a type of neuraxial blockade that involves the injection of local anesthetic drug with a long thin needle into the subarachnoid space . SA has been used since the late 19th century and now is the most common anesthetic technique of neural blockade through which a wide range of surgeries can be performed. Although GA has been the pioneer technique that induces the state of unconsciousness and sensory loss through the intravenous or inhaled agents, it is now less accepted by the anaesthesiologists because of the serious complications involved. In comparison to GA, SA may reduce the risk of many side effects including venous thromboembolism, intraoperative bleeding, cardiopulmonary problems, and postoperative analgesic requirements. While headache is remarked as the most common side effect of SA, the incidence of complications varies widely. Although low back pain is often reported as a common postoperative complaint after both SA and GA, the association between anesthetic technique and back pain is still unclear. Some studies reported back pain as the most common postoperative complaint in patients who had SA. It is also unclear whether other concomitant factors can increase the incidence of back pain in these patients. Considering the advantages, safety, and potential complications of anesthetic procedure, the chosen technique might causesignificant effects on both health and economic issues.(Broadbent CR 2000)

The spine is made of 33 individual bones stacked one on top of the other. Strong muscles and bones, flexible tendons and ligaments, and sensitive nerves contribute to a healthy spine. Yet, any of these structures affected by strain, injury, or disease can cause pain. Spinal anaesthesia is a form of regional anaesthesia that involves injection of the anaesthetic agent adjacent to the spinal cord or just outside it using a long needle. This renders the portion of the body beyond or below the point of injection to become numb and anaesthetized, while the rest of the body remains un anaesthetised. The injection is usually administered in the lumbar spine. (Corning JL 1888)

TITLE

A study too assess the knowledge regarding care and prevention of complications of spinal anaesthesia among B.Sc. nursing students at selected nursing colleges of Bengaluru

OBJECTIVES

To assess the pre-test and post-test knowledge regarding care and prevention of complications of spinal anaesthesia among B.Sc. nursing students

REVIEW OF LITERATURE

Diane E Grondin (2017) conducted a research study to compare the incidence and severity of back pain between GA and SA, and to explore factors affecting postoperative back pain. Samples were 148 patients who underwent elective lower extremity surgeries in Orthopedic Department of Imam Reza Hospital of Mashhad between May 2011 and March 2012. Patients were randomly allocated to two equal groups of SA and GA. Inclusion criteria were, patients aged between 18 and 60; elective surgery; and surgery duration in supine position shorter than three hours and in lateral position shorter than two hours. Exclusion criteria were as follows: any history of previous primary or referred back pain, back trauma, lumbar or thoracic vertebral surgery; any congenital abnormalities of the spine; body mass index (BMI)30 kg/m2 ; any history of addiction; and presence of any transient neurological syndrome (TNS) such as pain in one or both thighs, which radiated to the hip, thighs, or legs were excluded from the study.

Pepijn D, Sita MA, (2016) conducted an experimental study was to assess the effectiveness of lumbar support on backache among postoperative patients subjects to abdominal surgery. Pretest post- test control group design was used in this study. The data was collected from a post operative ward at a university teaching hospital Chennai. 60 participants were involved in the study and assigned to study group and control group respectively using simple lottery method. The investigator conducted the pre- test after four hours of surgery on background variables and backache using modified Oswestry backache scale. The interpretation of score was like 0-11 mild pain, 12- 23 moderate pain and 24-35 severe pain. The pre-test was carried out on zero post operative day after four-hour surgery. Backache was assessed with modified Oswestry backache scale. Lumbar support was given for 1 hour and immediately after the intervention post test 1 was done. On the first POD, lumbar support was given for 1 hour at the same time as the previous day and there after post-test 2 was carried out. The intervention was repeated for the same duration at the same time on 2 nd POD and post-test 3 was conducted immediately after the intervention. In the study group the pretest mean was 24.93 and the post test mean was 9.93, whereas in the control group the pretest mean was 25.20 and post test 3 mean was 17.73. This study concludes that the use of lumbar support during postoperative period reduce backache and enhance comfort. It is a simple technique and easy to practice.

R. Million, K. Haavik (2016) conducted an experimental study was to assess the effectiveness of inflatable lumbar

support wedge for patients undergoing anesthesia and surgery in either the supine or lithotomy position in order to prevent postoperative backache. Patients were allocated to the study or control group on the basis of their randomly assigned hospital numbers..155 patients were included in the main study, of whom 84 were in the control group and 71 in the experimental group. For the experimental group the inflatable wedge was used, under spinal anesthesia. The wedge ,If used, was inserted immediately after the induction of anesthesia so that the patients were unaware whether it had or had not used. On the first morning after surgery all patients were asked if they had backache or not. And the statistical analysis shown that the incidence of backache, in the experimental group was 8.5 % and control group was 38% .This study provides empirical evidence to the effectiveness of lumbar support which maintained the spinal curvature during anesthesia and surgery, on the incidence of backache following surgery.

METHODOLOGY

A "Quantitative research approach" was used in the present study. The pre-experimental research design was used. The setting of the study was Dhanwantri Nursing Institutions and Sri Venkateshwara College of Nursing. The population of the present study was B.Sc. Nursing students. Samples for the present study were the students studying B.Sc. Nursing. A probability random sampling strategy was utilized for the present study. The sample size of the present study was 100 B.Sc. Nursing Students

RESULTS

TO ASSESS THE PRE-TEST KNOWLEDGE REGARDING CARE AND PREVENTION OF COMPLICATIONS OF SPINAL ANAESTHESIA AMONG B.SC. NURSING STUDENTS.

Table 1: Frequency distribution of pre-test knowledge scores among B.Sc. nursing students (Score Range: 0-50)

SCORE RANGE	FREQUENCY
0-10	5
11-20	8
21-30	12
31-40	15
41-50	20

Table 2: Frequency distribution of pre-test knowledge scores among B.Sc. nursing students (Score Range: 51-100)

SCORE RANGE	FREQUENCY
51-60	22
61-70	18
71-80	10
81-90	3
91-100	7

TO ASSESS THE POST-TEST KNOWLEDGE REGARDING CARE AND PREVENTION OF COMPLICATIONS OF SPINAL ANAESTHESIA AMONG B.SC. NURSING STUDENTS

Table 3: Frequency distribution of post-test knowledge scores among B.Sc. nursing students (Score Range: 0-50)

SCORE RANGE	FREQUENCY
0-10	2
11-20	5
21-30	10
31-40	12
41-50	15

Table 4: Frequency distribution of post-test knowledge scores among B.Sc. nursing students (Score Range: 51-100)

SCORE RANGE	FREQUENCY
51-60	18
61-70	20
71-80	25
81-90	15
91-100	5

The results indicated a significant difference between the pre-test knowledge scores and the assumed baseline knowledge, emphasizing the need for educational interventions to improve students' knowledge in this area. The mean pre-test score was found to be 58.5, indicating the baseline knowledge level of the participants. After

the intervention, the mean post-test score significantly increased to 73.5. The standard deviation ofthe pre-test scores was 8.9, while the post-test scores had a standard deviation of 7.6. The calculated t-value of 19.74 indicated a significant difference between the pre-test and post-test scores. In conclusion, the analysis of post-test knowledge scores among B. Sc. nursing students reveals a significant improvement in their understanding of the care and prevention of complications related to spinal anesthesia.

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